Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Canceled)

2. (Canceled)

3. (Canceled)

4. (Canceled)

5. (Original) The method of claim 6 further comprising inserting a parity bit for said error count bit pattern into said transport overhead, where said parity bit is inserted in another portion of said transport overhead where said another portion is unused according to said standard that defines said high-speed frame.

6. (Previously presented) A method of generating transport overhead for a high-speed frame of data in a synchronous optical communications network, said high-speed frame of data including a plurality of low-speed frames of data, said method comprising:

　　　receiving an indication of error count associated with one of said low-speed frames of data, said indication of error count including a B1 count and a B2 count;

　　　determining an error count bit pattern representative of said indication of error count;

　　　receiving an indication of synchronization status associated with one of said low-speed frames of data; determining a synchronization status bit pattern representative of said indication of synchronization status; and

　　　inserting said error count bit pattern and said synchronization status bit pattern into a transport overhead for said high-speed frame, where said error count bit pattern and said synchronization status bit pattern are inserted in at least one portion of said

transport overhead and where said at least one portion is unused according to said standard that defines said high-speed frame.

7. (Previously presented) A method of generating transport overhead for a high-speed frame of data in a synchronous optical communications network, said high-speed frame of data including a plurality of low-speed frames of data, said method comprising:
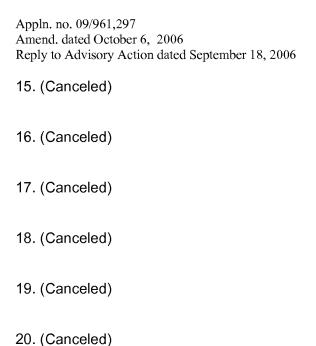
receiving an indication of error count associated with one of said low-speed frames of data, said indication of error count including a B1 count and a B2 count;

determining an error count bit pattern representative of said indication of error count;

associating a channel identifier with each of said plurality of low-speed frames of data; determining a channel identification bit pattern representative of said channel identifier; and

inserting said error count bit pattern and said channel identification bit pattern into said transport overhead for said high-speed frame, where said error count bit pattern and said channel identification bit pattern are inserted in at least one portion of said transport overhead and where said at least one portion is unused according to said standard that defines said high-speed frame.

8. (Canceled)

9. (Canceled)

10. (Canceled)

11. (Canceled)

12. (Canceled)

13. (Canceled)

14. (Canceled)

15. (Canceled)

16. (Canceled)

17. (Canceled)

18. (Canceled)

19. (Canceled)

20. (Canceled)

21. (Canceled)

22. (Previously presented) A method of generating transport overhead for a low-speed frame of data in a synchronous optical communications network, said low-speed frame of data received as part of a high-speed frame of data, said method comprising:

      receiving at least one error count quantity associated with said low-speed frame of data, where said at least one error count quantity is determined from an error count bit pattern including a B1 count and a B2 count extracted from said high-speed frame of data;

      determining a standard error monitoring set of bits based on a previous low-speed frame of data;

      creating an altered error monitoring set of bits that differs from said standard error monitoring set of bits in a number of bit positions equivalent to said error count quantity;

      inserting said altered error monitoring set of bits into a transport overhead for said frame, where said altered error monitoring set of bits is inserted in a location normally occupied by said error monitoring set of bits according to a standard that defines said frame, wherein said standard that defines said high-speed frame is the SONET standard;

      receiving an indication of a quantity of errors associated with said high-speed frame; and

where said determining said error count quantity is further based on said indication of said quantity of errors associated with said high-speed frame.

23. (canceled)

24. (Canceled)

25. (Canceled)

26. (Previously presented) A method of de-multiplexing a plurality of low-speed frames of data from a high-speed frame of data, said method comprising:

receiving said high-speed frame;

extracting an error count bit pattern including a B1 count and a B2 count from said high-speed frame;

determining a quantity of errors associated with said high-speed frame;

determining an error count quantity based on said error count bit pattern, where said determining said error count quantity is further based on said quantity of errors associated with said high-speed frame;

determining a standard error monitoring set of bits for a low-speed frame;

creating an altered error monitoring set of bits that differs from said standard error monitoring set of bits in a number of bit positions equivalent to said error count quantity; and

inserting said altered error monitoring set of bits into a transport overhead for said low-speed frame, where said altered error monitoring set of bits is inserted in a location normally occupied by said standard error monitoring set of bits according to a standard that defines said low-speed frame, wherein said standard that defines said high-speed frame is the SONET standard.

27. (canceled)

28. (Canceled)

29. (Canceled)

30. (Canceled)

31. (Canceled)

32. (Canceled)

33. (Canceled)